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NEW SERIES. NEW HAVEN, CONN., OCTOBER, 1874. VOL. IV., No. 10.

A TALK TO THE PUPILS IN THE NORMAL SCHOOL.

BY REV. A. C. PIERCE, BROOKFIELD.

I am strongly impressed in undertaking these few words, with the idea of power, as expressed before me.

Entering the engine-room of one of our large manufacturing establishments, the engine, with its ceaseless roll of the driving-wheel, and its mighty rush of connected machinery, give the idea of force, here concentrated. But how came to pass the engine itself? That active, ingenious brain which took the crude iron and made the machine is surely *the* power, rather than the skillfully-constructed boiler, piston, and wheels which it has produced.

You, as teachers, are to take mind in its crude state, in our different communities, and fashion it into strength and serviceableness, for the benefit of the world. It is a great end to accomplish, a most important result to be achieved, and you cannot gain too exaggerated a notion of your functions as instructors of the young. Do not think of your calling as a mere position, or engagement for a few months of each year, or as a mere money convenience to yourself. In your vocation as teacher, remember that the object to be accomplished is not simply or mainly the hearing of lessons, and being sure that right answers are given. The higher object is to awaken thought, to quicken and broaden intellect, and so fit the young for effective agency for good in society. In this view of your avocation it will suggest itself to you, that much may be done and should be done outside of books. By varied devices and methods of your own, you may quicken the thoughts of your pupils, and set their mental powers at work as you cannot by any mere hearing of lessons.

A personal reminiscence will illustrate this suggestion. When engaged in teaching, it occurred to me I might accomplish something for certain pupils in asking them questions, the answers of which would involve something of *thinking* on their part, and which should be given to me on the morning after the question was proposed. To one bright boy, of eight or ten years, the question was proposed, "If you were to make a hat, what would be the first thing you would do?" He was requested to answer the next morning; to which he replied, his face shining with evident satisfaction, "I can answer now; as the first thing, I would buy a trap." That, as you perceive, was going back to first things in the process of hat-making. On the principle of catching the hare before cooking it, he must have the fur before building the hat, and the trap must be the instrument of catching the animal growing it.

Another lad, an inquisitive little fellow, had noticed that my umbrella had a horn tip instead of a metallic one, and he asked why it was so. I replied, "That is a good question for you to think of and answer. Consider the matter over night, and let me know in the morning." On meeting him the next morning and asking for the result at which he had arrived, with a very wise look he responded, "I know; it is so you won't get struck with lightning." This, of course, was very satisfactory to me, for although there was really no reason why I had a horn tip to my umbrella, beyond the fact that it was there when purchased, the boy that night had been *thinking*, and that was the object had in view when the inquiry was addressed to him.

These incidents will illustrate the point of which I am speaking. Make it an essential point in your teaching to broaden and quicken thought, and tax your invention to the utmost to this end. I have sometimes thought of the serviceableness of the "coming man," who shall successfully write a book on "Learning to Think."

As those anticipating going before School Boards for approbation as teachers, it is quite natural that you should inquire, "In what branches shall I be most likely to fail in my examination?" I feel in some measure qualified to answer that question, by a score of years' experience as local School Visitor. In that experience I have learned that where failing occurs, it is almost sure to be where it ought not to be, viz., in those very departments which have respect to our speech. If you make failure at all, it will more likely than otherwise be in spelling, read-

ing, or grammar, especially the last, and you will do well to make special endeavor here.

You will allow me to refer to one danger in connection with Normal School education. *Method* is a very prominent object in instruction imparted in the Normal schoolroom. Now I find no fault with this. Method is important as subordinate to genuine waking up of mind and imparting knowledge. But it sometimes comes to pass that a pupil of the Normal School goes into the district schoolhouse with a head so full, to overflowing, with the *way of doing it*, that really there is not much else accomplished. The school-bell strikes just at the right moment, "position" is assumed with mathematical precision, and all the movements of classes is in military exactness, but this is pretty much all. This, of course, is a mistake. Order, good order, is a prime requisite in a schoolroom; but I would impress it upon you that your success will register itself only in hard work obtained of the pupils under your charge, the awakening of their powers, and their solid attainments in learning.

But I must not extend these words. I have noticed a motto upon your blackboard, "Life is made up of beginnings." It may be thus in the meaning of the writer. But in another, and I think a better sense, it is true, "Life is made up of finishings." Let it be your aim to attain finished qualification for your work, finished duties in the schoolroom, and a character finished in perfectness of proportion and development, and a rounded, finished life, in respect to all its influences for good.

THE USE OF THE DIAGRAM IN GRAMMATICAL ANALYSIS.

SELECTIONS FROM ARTICLES BY PROF. ALBERT SAYLER, IN THE MICHIGAN TEACHER.

No. I.

The Diagram.—Grammatical diagrams should be such pictures to the eye as systematically represent and symbolize sentential and syntactical structure. The grammatical relations of the structural parts of a sentence—grammatical and logical adjuncts, whether word, phrase, or sentence specifiers, modifiers, or qualifiers—should all find appropriate expression in the diagram. The diagram should be characterized by neatness, mechanical skill, and a graded uniformity and compactness.

Diagrams are to such a degree the life and spirit of sentential analysis and parsing, that they might with propriety be termed *diagram-analysis*, instead of the simple term "analysis," which they now bear. * * * * * * *

Objections to the Diagram.—As many a man having a fair education and possessing much general intelligence can be found who condemns the use of the blackboard in school, perhaps because when a twig he was not that way inclined, is it then a matter of surprise that many of those who have become stereotyped and fossilized under the tutorings of their ancient and favorite "sere and yellow leaf" grammatical authors, utter exclamations of surprise upon opening one of Prof. S. W. Clark's grammars, or his analysis, and there being confronted with an array of diagrammatic symbols, which to their grammatical understanding seems as senseless and meaningless as a conglomeration of butterflies' wings? In view of this, what wonder is it that they interpose the objection that the diagrams are "new and strange"!

The steam engine was once new and novel, and —shame to incredulity—its inventor and improvers were considered visionaries and fanatics. Lincoln approvingly listened to the otherwise fancifully-considered plan and draft of an Ericsson for an ironclad "cheese-box." Horse-rakes were once new, and so were sewing- and mowing-machines; and the utilization of these advancements of enlightenment required much time, patience, skill, and gumption. Have the results warranted the pains? It is clear, then, that the diagrams are not to be condemned merely because they are "new and strange."

The next charge against them is, they are "complicated, difficult, and imperfect." What are the diagrams designed to represent? Are they intended to represent some mere toy, some jack-knife-haggled plaything made by a bungling boy? If they are, then the charge is partially correct. On the contrary, they analogically and artistically symbolize every manner and form of written language, in comparison to which the mechanical construction and artistic beauty of the machines mentioned above sink into insignificance. For what other product of the human mind so grand, so magnificent as the English language? It is the product of the power, vigor, and intellect of countless minds during the past thousand years.

Dr. Johnson has said, "a whole life cannot be spent upon syntax and etymology, and that even a whole life would not be sufficient."

No insignificant evidence of the greatness and magnitude of the English language is the fact that there are over four hundred grammars extant, and

new ones constantly issuing from publishing houses like the dispersion of leaves from a shade-tree in "chill October winds." If this be the expansiveness of the syntax of our language, can it be objectively represented in all its constructions and complexities? Can it be taught so as to become the most fascinating of studies by the use of a meager, mechanically-starved system of symbols expressly designed for the *easy* understanding of either the old-time grammarian or the modern drone? No; December can be as consistently married to June as to tack to the syntax of the modern grammar any such excrescence.

As the diagram is the exact symbol of every mental exercise evolved in written expression, it is like a looking-glass held up to nature; and if it truthfully reflect each beauty and each imperfection of the language, then its faults, whatever they may be, are not its own, but those of the language which it pictures. Thus, if the language be faulty, the diagram and the language coinciding in every point raised by the objector, show him to be not only ignorant of the diagram, but perhaps equally ignorant of the language itself; and the objections raised are made to recoil upon themselves.

Geography, excepting its descriptive portions, is taught by a purely object-method in our schools; and the three great popular works are Guyot's, Cornell's, and the Eclectic Geographies. The distinctive features of these works are their improved maps, which represent, in the usual manner, rivers, cities, and towns. But they, in a manner heretofore unknown, represent water (excepting rivers), lowlands, plateaus, and mountains. Now let us examine the office of some of these symbols: A river is typified by a black line. Now who could, merely from this subjective image, recognize the objective reality? Are the sights of these two objects (the river and its symbol) productive of the same or similar mental exercises? No; it requires a vigorous exercise of the constructive and imaginative faculties to recognize in the symbol any of the distinctive features of the river.

What about the "dots"—which, to a child, represent not simply the situation of cities and towns, but the cities and towns themselves? The dots would make far better symbols for post-holes or rat-holes; yet they are the best symbols we have, however, and they serve a good purpose.

Again, how faithfully do the diagrams used in solid geometry, drawn in prospective to represent cubes and various other solids, correspond to the comparative magnitude of the included angles, the relative direction and length of the receding lines—the actual attributes of the solids themselves? Yet they are the best that have ever been devised. The successful study of geometry would be next to an impossibility without them, and but few would be familiar with the demonstrations of the Legendre.

The arrangement and shading of colors (in the geographies alluded to) for the purpose of picturing in a bold manner the grand characteristic traits of the physical structure of the earth, are improvements—inventions, I may say—that have created a tidal wave of sensation and interest throughout the entire union. These symbols are more than representative; they are auxiliaries, for we cannot now do without them. But, after all, they are not equal to the objects which they represent and illustrate, either those used in geography or those used in geometry.

Now it does not weaken the force of the argument to admit that these geographic symbols are art-designs for the illustration of nature, while the grammatic diagrams are only art-devices for the illustration of a work of art. On the contrary, this fact serves as a proof of strength, for nature must needs be superior to her picture, and art can always be surpassed.

WHAT SHOULD BE ACQUIRED IN THE DISTRICT SCHOOL?

BY H. B. WILSON, SUPT. PUB. INST., MINNESOTA.

Every child should acquire a knowledge of the orthography of all the common English words which he may have occasion to use, enabling him to spell them orally, without any hesitation, to pronounce them correctly with the proper articulation and accent, or to write them with equal facility. He should be familiar with the rules of spelling, and be able to apply them in practice.

The children should be familiar with the common rules and principles of punctuation, and with those concerning the use of capital letters, and be able to apply them intelligently. They should be acquainted with the recognized rules and forms of letter-writing, and be able to date, begin, and close, fold and address a letter, with taste and propriety.

"They should be able to write neatly and legibly, and with at least passable ease and rapidity, and have correct habits of sitting and of holding the pen, together with a creditable style of forming all the script capitals.

"They should be able to read, at sight, and with ease and a fair degree of correctness as to modulation, inflection, and expression, any simple piece of English prose and poetry; and be able to give and to apply the fundamental rules and principles of good reading. They should know in what manner to sit or stand, while reading, and how to hold the book or paper, and how to turn the leaves. They should be instructed as to the proper amount and adjustment of light in reading, and how to favor the eyes and preserve them from injury. They should be able to transcribe from dictation, with ease and promptness, and with correctness of spelling, punctuation, and capitals, any plain and simple paragraph from a book or newspaper.

"They should be able to read and write, with great facility and accuracy, any number, large or small, either in the Arabic or Roman characters. They should know the common multiplication table perfectly, and be quick, skillful, and exact in the four fundamental rules of arithmetic. In addition to that, they should be able to handle all the ordinary forms and combinations of decimals and common fractions, with quickness and dexterity, and be thoroughly grounded in the few fundamental principles upon which all the operations of interest and percentage depend. They should also know how to keep simple accounts, to make out ordinary bills, write receipts and promissory notes in a correct and legal form, and to draw up such other simple business papers as are required in the common transactions of the people. They should also be instructed in the technical but familiar nomenclature of trade, commerce, and finance, that they can read articles on those subjects in books and newspapers with ease and intelligence, and understand them when read by others.

"They should be able in conversation and writing, to express their own thoughts in good English, and should know enough about the elementary rules governing the proper use of the English language to enable them, readily and intelligently, to avoid all the more common errors of speech on their own part and to detect and correct them in others. In other words, they should acquire the habit of using proper and correct language, by being carefully taught and strictly required so to do, in all the intercourse of the school-room, and have at command a few of the elementary principles of what is called grammar, to be referred to and applied as *tests* when occasion requires. They should be familiar with the definitions, meanings, and proper uses of the words in common use among the people, and accustomed to note the distinction and shades of meaning between different words of kindred import, not so much by formal lessons from text-books, as by attentively observing and having explained to them all the more curious and important words in the reading lessons and in any of the other books used in school; and especially by habit of constantly referring to the dictionary, which should be encouraged and insisted upon from the time a child is able to find the words. They should know that the power of speech is God's great and distinguishing gift to man, and hence that the proper study and true knowledge of words, whereby human minds and souls hold converse with one another, are worthy of a high place in every scheme of education. They should, for the same reason, shrink from the use of slang and words of coarseness and profanity, with almost as much aversion and disgust as from direct moral contamination.

"They should know the shape of the earth, with the well-known facts or proofs which determine the same; its motions and the effects thereof; latitude and longitude, with their characteristics and uses; the zones; the grand divisions of land and water; the hemispheres, and how the lands and waters of the earth are apportioned between them; the principal mountain ranges and rivers; the climates and chief productions of the respective zones; the races of people, with their leading characteristics and religions, and the regions of the globe where they respectively dwell; the principal forms of government on the earth, with the distinguishing features of each; the leading nations and countries of the world, where situated, of what race or races, their respective forms of government, degrees of civilization, religions, chief industries, and population; the boundaries, area, and population of the United States, with the principal lakes, rivers, mountain ranges, and cities; the States and territories comprising the American Union, with their respective boundaries, leading natural features, populations, productions, capitals, and chief cities; the State in which they live, its counties and county towns, its principal rivers, canals and railroads, its chief cities and towns, its soils and productions, and the leading occupations and industries of the people; the country in which they reside, its boundaries, area, and population—its rivers, streams, and railroads—its soils and productions—its cities, towns, and villages—its mills, manufactories, and public buildings, together with the name and population of the county seat; the township, its number and range, and the principal meridian to which it belongs—with the origin

of our township system, and the manner of reckoning numbers and ranges—its surface, soil, population, and productions; and finally, the particular district in which the schoolhouse is situated, its designation and number, the part of the township in which it is located, its exact boundaries and area, its aggregate population and number of persons of school age, together with the topography of the district and the precise location of the school house.

"They should be familiar with the outlines and representative facts and events in the history of their own country. They should know something of the men who first sought homes on these shores, whence they came, and why they came; something of their early struggles and trials; something of the wars and conflicts through which the nation has passed, and the causes and issues of those wars; something of the moral and political questions which have shaken the country and helped to shape its destiny; and something of the origin, nature, rise, culmination, and overthrow of the slave power. They should be able to define the three forms of government which the nation has known, and to trace some of the steps and causes which led to the successive changes. They should be familiar with the leading features, principles, departments, and methods of our present form of government; with the outlines of its fundamental law; the respective powers and prerogatives of the State and national governments; the manner of electing and appointing civil officers and agents, of regulating, collecting, and disbursing the public revenues, of transacting civil and municipal business, of administering justice, making and executing the laws; and with the more important rights and duties of citizens. Their knowledge of these *outlines* should be so clear and exact that, if cast among ignorant savages in some unknown isle of the sea, they could re-state them correctly, and in due time construct thereon a republican form of government.

"They should know enough of their own physical and mental organization to enable them to take proper care of both their bodies and brains. To this end they should know when, how, and what to eat and drink; when and how much to sleep; the uses and abuses of clothing; the laws of healthful labor, exercise, and rest; the functions of the brain; the more obvious relations of body and mind; and the tokens and penalties of disregarding the laws of health, whether of body or mind.

"They should understand the rudimentary principles of drawing and perspective, and possess some practical ability and skill in the use of the pencil; enough, at least, to enable them to produce, with passable correctness and facility, drawings, in flat outline, of such simple objects and figures as they may wish to illustrate. There is hardly any business or employment in life, in which the possession of such knowledge and ability is not found to be extremely useful, and the lack thereof a great disadvantage. A knowledge of the elements of drawing is also a source of great delight, and an unfailing means of diversion, to most children; and the facilities for acquiring such knowledge are now abundant and cheap.

"They should understand the rudiments and principles of vocal music. There is not one child, of ordinary mental and physical endowments, in a hundred, who is not capable both of understanding and practicing those principles; and I know of no other acquisition that yields richer returns of profit and pleasure, for the time and effort expended. A tuneful, song-loving child *may* be vicious and moody, but it is a rare phenomenon.

"They should be acquainted with the rudiments of natural history, so as not to move as utter strangers among the plants and animals which constitute so large a proportion of nearly every landscape, and which contribute so much to the beauty and utility of life; and with the elements of those wonderful, omnipresent, and beneficent forces which pervade and animate, as it were, the universe of matter.

"They should be gentle and refined in speech and manners; docile in spirit and modest in deportment; truthful, ingenuous, and manly; obedient, respectful, and affectionate towards their parents and teachers, and reverential towards God and whatsoever is sacred and holy. These things, it is true, are not so immediately within the control of teachers, but the influence, example, and precepts of the schoolroom should all *tend that way.*"

Estimating the average period of attendance at from seven to nine years, of two terms, or six months, each year, it is believed and affirmed that the public schools of the State can and should accomplish the things which have been mentioned, for all the pupils who remain under tuition for that length of time, and in like proportion for shorter periods of pupilage.

HOW THIS IS TO BE ACCOMPLISHED.

How are our schools to be made to accomplish all that is here indicated? I answer: 1. *We must have more well-qualified teachers.* 2. We must have a well-arranged course of study for all our district schools, and then see that it is strictly adhered to. 3. We must eliminate from our course of study all

useless details, unnecessary verbiage, and vexatious minutiæ. Those who are to obtain all their training in the district schools, and that in a few years' time, should attend to those subjects which will be of the most practical use to them in after life; and should not be required or permitted to fritter away valuable time in lumbering the mind with mere trash that they will never find occasion to use after they leave the schoolroom.

Four-fold more time is spent in the study of geography than its importance demands. Instead of requiring the pupil to study the earth as an individual organization, with a definite structure, character, and purpose, and the simple principles underlying the science of the mathematical and physical geography of our planet, its great continents, oceans, zones, climate, motions, animal and vegetable productions, years are spent by them in committing words to memory in reference to unimportant details which will be very soon forgotten. Three or four years' time usually devoted to this branch might be saved, if the subject were only presented properly.

Too much time is also devoted to the study of arithmetic. There are many topics presented in most of the text-books on that subject which are of but little practical use to nine-tenths of those attending public schools. For example: the least common multiple of complex fractions, arithmetical and geometrical progression, square and cube root, circulating decimals, duodecimals, etc. How or when will our farmers, mechanics, lawyers, doctors, or merchants ever have occasion to solve problems involving these principles? More time, as a general rule, is devoted to the study of arithmetic than to any other branch. Too many teachers ride the hobby of mental arithmetic. They require their pupils to pursue it during their entire school course. From three to four years might be saved from the time usually devoted to the study of arithmetic, if the subject were only presented in a proper manner, by an expert teacher.

But worse than all, years are squandered in the study of what is called English grammar! Text-books on that subject, containing dry, unphilosophical, technical definitions and rules in etymology and syntax, rules for parsing and analyzing sentences, with notes in fine print, and exceptions without number, are sometimes forced into the hands of school-children by State law. These books are studied and recited, parsed and analized, from term to term, and from year to year, without the pupil gaining much knowledge in reference to the use of the English language. By all this memorizing of rules, they are made no better able to speak or write their own mother tongue. It would be as rational to expect one to learn to swim by committing rules to memory as to learn to write or speak in that way. A facility in writing and speaking a language can only be acquired by practice, which should be commenced early and continued constantly. The pupil should be taught language orally, and principally by means of the blackboard. The text-book cannot supply the place of the living teacher. The child must have daily practice in constructing sentences, and in writing them, instead of so much text-book cramming. More can be imparted in a year in the way of imparting a practical and critical knowledge of the use of the English language, to a child, when presented to him in a proper manner, than in five times the same period, when taught after the system of Kirkham or Murray. —Ann. Report of Supt. Pub. Inst., Minn., 1873.

HIGH SCHOOLS—FACTORY CHILDREN.

OUR HIGH SCHOOLS.

Whatever may be said in regard to the public school system of the United States, this is certain, that it has reached a more complete and effective state than our high schools. In the Northern and Western States there is hardly a school district that does not possess its common school, and generally it is one of the first buildings erected in a new settlement. These schools, in many cases, of course are very poor. The teachers, as a rule, are incompetent; the instruction insufficient; the method careless; and in many cases the school houses are very unhealthy. Notwithstanding all these drawbacks, it will be found that wherever these schools are in operation the people are able to read and write; and on the whole, it must be admitted that our public school system has brought about many good results. Not so favorable, however, is the verdict on the effectiveness of our high schools, colleges, universities, etc. In spite of their multitude they have never accomplished much. The number of American authors, scientific men, etc., known in Europe is very small, and cannot be compared with German and English celebrities. America's original thinkers and investigators can be counted on one's fingers. It is not hard to explain this deplorable state of affairs in our higher educational system. The first care of a new nation is to supply the necessaries of life. And however rich in natural supplies our nation

was, they had to be worked. Gigantic labor and practical application for the future were the chief conditions under which a young nation could expect to prosper. The schools were simply called into existence as one of the means to help along. The constant cry for technical schools is a proof that we are yet in this utilitarian state. Thus it was brought about that our public schools, which have devoted themselves exclusively to practical life, have reached such a high grade of perfection, while the higher school system, calculated to improve and cultivate where the common schools have not touched, have been neglected.

FACTORY CHILDREN.

Among the victims sacrificed in the terrible calamity which occurred recently at Fall River, Mass., were a number of children. These little ones did not go into the factory of their own accord. They were brought to this end by their money-seeking parents and the conscienceless manufacturers, upon whom the guilt rests. They were a sacrifice on the altar of mammon. It is high time that this dreadful Moloch service be put to an end. We read in the labor reports of the State of Massachusetts, in regard to these same establishments in Fall River, that "in these factories are many little children, boys and girls, of which a number are not over seven years old. All these children have almost never been inside of a school-house." Massachusetts is in possession of a compulsory school act, but it is never enforced. Many parents look upon such a law as absolute tyranny. They must have a high idea of individual freedom if they refuse to send their children to school. It is handier to send them to the factory. There they learn to work and earn money. It is possible that many children would rather go to work than to school, but this is the fault of the parents. If the child refuses to go, compulsion must be used. From a child's birth to its maturity its life must be regulated and directed in a certain course which will result to its best advantage. Spooling, no doubt, prospers no less without compulsion than spelling. In the factory the child is a machine ; in the school, a plant. In the former it is compelled to work before it is able and has the necessary strength ; the result is mental and physical inferiority. In the latter it is carefully tended and brought up, and will reach maturity with faculties and limbs fully developed and prepared to meet the world. But the manufacturers say that they cannot exist without the help of children. Is this a fact? Then let the cloth manufacturing interests be sacrificed rather than the children. In that case we will wear no more woolen and cotton cloths. With hides we will clothe ourselves, and save our children from destruction. It is not, however, as the manufacturers say ; it cannot and must not be so. We know large manufactories on the Continent where no child under fourteen years can be admitted to labor, in spite of which the proprietors of these factories prosper and get rich. Let the same rule be adopted here. —New York Staats Zeitung.

IMPORTANCE OF THE HISTORY OF PEDAGOGY.

BY W. N. HAILMAN.

The history of any art or science is the great receptacle of the thoughts and achievements in that art or science ; hence it furnishes the basis of progress.

The man who re-invents the steam-engine to-day, proves himself a master mind ; but this mastership does not benefit the race, which is already in possession of the steam-engine. On the other hand, the race would have been benefited by the labors of this master mind if he had devoted his energies to the same field on the basis of James Watt's achievements. Thus, in education, too, the teacher who, ignorant of Pestalozzi's and Froebal's principles, re-discovers one or more of these, proves thereby that he is the peer of these pedagogic heroes, but his labors yield no gain to the race, and he would have been a much more useful member of the craft had he, even with inferior powers, devoted himself to the principles discovered, to the apostleship, as it were, of Pestalozzi and Froebel.

Again, if we consider that the empiric in physical science must waste a great amount, not only of time and working force, but also of material, in order to arrive at his results, we are justified in looking upon him as an absolutely injurious member of society, who destroys where he would create. Yet, in view of the abundance of inorganic material and its apparent indifference, we may forgive him his blundering, and while we pity him, we may still honor him. Not so with the blunderer in educational matters, whose material lives and grows, and, in consequence of his mistakes, may live and grow into misery and crime. Such a blunder becomes a curse to society, and should not be countenanced. Indeed, it is no hyperbole if educational empiricism, in the family as well as in the schools, is designated as "murder of the innocents."

How little this fact is generally appreciated, appears from the indifference of parents and average

school authorities to the preparation of those whom they employ in the very things which are of the most importance. The future teacher is examined in a number of arts and sciences, but little or no heed is given to his or her proficiency in educational principles and in pedagogic skill. The training of the youngest pupils, most easily impressed for good or evil, is still, in the majority of cases, intrusted to the least experienced, for the sake of economizing expense. It is evident that a knowledge of the history of education, an acquaintance with the thoughts of earnest men who have gone before us, a familiarity with the results of faithful laborers in the same as in similar fields, an intimacy with their struggles, their martyrdom, or their triumph, will do much to enhance our efficiency, as well as our personal self-respect, while, at the same time, it will rid us of every vestige of self-complacent pedantry, and indolent servile submission to arbitrary authority. While it will enable us to profit by the failures, as well as by the successes of our predecessors, it will teach us still to look ahead and to strain every nerve in earnest, thoughtful efforts to approach the yet distant ideal.

—From the History of Pedagogy.

MIND AND BRAIN.—Dr. B. G. Wilder, in a paper read before the American Scientific Association, criticizes the methods of studying the relations between brain and mind. The phrenological method is defective, because anatomy does not show any defective correspondence whatever between the folds and fissures of the brain and the outer surface of the skull, and because the most expert phrenologists often fail to define character by the head. As for the pathological method, which compares brain-lesions with mental phenomena, observed during the life of the individual, there is good reason for supposing that peculiar mental conditions may exist without recognizable brain-lesion, and *vice versa*. And Brown-Sequard says that all parts of the brain may, under irritation, act on any of its other parts, modifying their activity so as to destroy or diminish, or to increase and to morbidly alter it. The experimental method, which irritates or destroys certain cerebral regions in living animals, merely demonstrates the existence in the brain of centers of action for different sets of muscles; it necessarily produces abnormal action, and fails to show the relation between brain and mind. Dr. Wilder would follow the example of phrenologists, but employing the brain itself for comparison, instead of the skull, using large numbers, and comparing the two sides. He would also employ canine instead of human brains, because of their simple fissural pattern, and the possibility of an accurate knowledge of the mental characteristics of dogs. Better results might be expected from the study of the brains of persons with whom we were acquainted in life, but that is impracticable.

YOUNG TEACHERS' DEPARTMENT.

BEFORE SCHOOL—AFTER SCHOOL.

BEFORE SCHOOL.

"Quarter of nine! Boys and girls, do you hear?"
"One more buckwheat, then,—be quick, mother, dear!"
"Where is my luncheon box?" "Under the shelf;
Just in the place you left it yourself!"
"I can't say my table!" "O, find me my cap!"
"One kiss for mamma, and sweet sis in her lap;"
"Be good, dear!" "I'll try." "9 times 9's 81."
"Take your mittens!" "All right." "Hurry up, Bill; let's run."
With a slam of the door, they are off, girls and boys,
And the mother draws breath in the lull of their noise.

AFTER SCHOOL.

"Don't wake up the baby! Come gently, my dear?"
"O, mother! I've torn my new dress; just look here!
I'm sorry; I only was climbing the wall."
"O mother! my map was the nicest of all!"
"And Nelly, in spelling, went up to the head!"
"O say! Can I go on the hill with my sled?"
"I've got such a toothache!" "The teacher's unfair!"
"Is dinner most ready? I'm just like a bear!"
Be patient, worn mother, they're growing up fast,
These nursery whirl-winds, not long do they last;
A still, lonely house, would be far worse than noise;
Rejoice and be glad in your brave girls and boys!

SIGNALING CLASSES.

Much diversity of custom prevails among teachers with respect to means and methods of signaling the movements of classes. Many teachers use the bell, giving a stroke for attention, one for rising, and another for moving in a certain order. Some teachers signal by successive snaps of the finger, or by raising in succession one, two, and three, fingers: one advantage of this means is that it is always at hand. This is perhaps its chief, if not its only, recommendation. Again, some teachers move their classes by the simple tap of a pencil upon the desk; others by counting one, two, three etc., or by giving the orders *attention, rise, pass.*

If a bell is used, it should be with the least sound audible. Anything like a loud stroke or jingling of the bell should be avoided. Nothing is more inspiring of disorder, confusion, and noise in a school than a loud and careless use of the bell. On the other hand, no articulate sound is more conducive of quietness and good order than the almost inaudible tap of the teacher's pencil. On general principles, however, where signals are given by the teacher, we prefer vocal ones to those given by any other means. The teacher's voice is the natural medium of communication with his pupils, and is no less available as a means of indicating the order of their movements than of directing the course of

their general conduct. Its sound is the only proper sovereign one of the place.

Whatever means of signaling a teacher may employ, the system should be as simple as possible, consistent with a proper degree of order in the movements of the pupils. Some teachers give too many signals, having one for attention, another for taking up books, another for turning toward the aisles, another for rising, another for dressing the line, another for moving to recitation seats, and another for sitting. To thus grind up the aggregate of the movements of a class, and then shake a teabell at each one of the microscopic particles, is not order, but rather a most ridiculous affectation of it.

Without almost constant care on the part of the teacher, the pupils become careless in observing the separate signals. At the signal for rising some will be gathering up their books; others, again, will be moving to the recitation. This evil, like all others, can be corrected only by attending to it—by having but few signals and requiring prompt and exact observance of each. Again, teachers are liable to fall into the habit of giving the different signals too rapidly. This invariably causes the pupils to anticipate the signals, to make the movement before the particular signal for it has been given. The teacher is often-times led to hurry up the signals in order to get them all in, if possible, before the pupils have executed all the changes. Where a great many different motions are required to be gone through with, each having its particular signal, the teacher will usually be able to give all the signals by the time the class, doing its best, will have completed its share of the performance. We have seen it tried, and the feat successfully accomplished. The effect is very amusing. Those who do not dare to venture upon such an undertaking should have but few separate signals for any general movement, should give them slowly by some appropriate and natural rather than artificial means, and should insist upon each signal being promptly and properly responded to by each and every pupil to whom the signals are addressed.

—The School.

SPELLING.

Teachers seem to be pretty well agreed on two points with reference to teaching spelling. First, that it is acquired chiefly by the *eye*; and, secondly, and naturally following from this, that an injury is done whenever a pupil *sees* a word spelled incorrectly. *Hearing* a word spelled wrong is only a less evil, because the impression upon the *ear* is less permanent than that upon the *eye*.

Now, how can we, to the greatest extent, avoid incorrect spelling in our recitations? In oral spelling, the pupils hear a difficult word spelled wrong three, four, or half a dozen times, and right once. Which will make the most lasting impression, especially when the pupil can see no *reason* why one is wrong and the other right? The same may be said of written spelling from memory. If he spells it wrong, and then corrects it, the eye—so far as that lesson goes—is as much accustomed to the wrong as to the right. But how can this liability be avoided?

Suppose that we give up oral spelling from *memory* entirely, and let the pupil spell with the words before him. This will require him to *look* at the printed words as a whole, and to see and hear the letters and syllables in their due order. Then let him write the words, not from memory, but from the book. This will keep his eye still longer upon the printed word, and show him how it looks when written.

—The Mass. Teacher.

KEEPING AFTER SCHOOL.

Few practices are worse than that of keeping children after school to make up lessons in which they have failed. The old plan of whipping learning into them was founded on more philosophical principles; for the whipping stirred up sensations and emotions which set the blood circulating rapidly, causing increased activity of the brain. But there is not one argument in favor of detaining children after the time for dismissal. As a punishment it falls more heavily upon the teacher than upon the negligent pupil; it unfits her for the next day's work, and eventually undermines her health. Its effect on the pupil's mind is bad. The truth is that the only education is self-education. Compelling children to learn certain phrases is not educating them. When children are obliged to make up imperfect lessons, they learn only *patches* of the subject, and do it in a lifeless manner, without interest, without unity, without comprehension of the whole design. The worst scholars are those who come from a school in which keeping in for lessons is the practice. It is a trait of human nature to put off what is to be done as long as possible; and if children discover that it is in order to learn and recite their lessons after school hours, they will put off their study till that time, so the result is that

school-time is turned into play-time, and play-time into school-time. "What, then, shall we do with careless pupils?" cries the weary, discouraged teacher. We think it not out of place for a teacher to show displeasure at the failure of her scholars to do their duty. But the best way is to throw the responsibility of promotion upon the children and their parents, giving them to understand that pupils must study at the proper time, if they would be advanced; that the only alternative is study or failure. Better that a few children be dropped into a lower class than that a whole division be made stupid, dogged, and inert by an attempt to impart knowledge by hydraulic pressure. Detention after school for lessons destroys the individuality of the child, makes him hate his lessons, his school, and his teacher. This is a free country; and the sooner we adapt our school management to the genius of our institutions the better off we shall be. Individual responsibility is the true doctrine to hold. *Study or fail; behave or withdraw*, is the best platform to stand on, the easiest for the teacher, and in the end the best for the child. Lessons should be learned voluntarily, and for a good object; not under compulsion or for the sake of repeating a certain number of pages in a book. This evil is so great in Chicago that we hope the Board will prohibit the practice. It would not be true to say that good teachers never detain pupils for imperfect lessons; but it *is* true that the worst teachers do it the most. The only failure that the teacher is in duty bound to have children correct, are failures in written examination; and for this work the time of a regular recitation should be taken.

—Chicago Teacher.

ON THE LOOKOUT.

"Up with the times" is the usual expression to denote that character of a young teacher which indicates that he is a student of his business. Innumerable mechanics sink into positions of endless routine, which they occupy a life-time, without thought or worthiness of promotion, simply because they practice their trade as their "boss" taught it them, without attempting to increase their stock of ideas by reading the papers and books which treat of their work, or visiting other workmen with "an eye to improvement;" or even without a thought of themselves in any way improving their machines or diminishing their labor. Many of these are competent, ingenious, and capable of large responsibilities, and would surely attain to them, could they have had the secret of being on the lookout. To this class, the success of certain comrades, who once worked underneath them but now have reached lucrative and important positions, is inexplicable. They didn't seem to "amount to much." They really do not possess the ability of their underlings. But they were on the lookout.

They reasoned thus, perhaps: "Men are men. Men hold high positions. I am a man. I can hold high positions." Not very close logic, but good for practical purposes. "Improvements are continually made. They are made by mechanics. I am a mechanic. I can make improvements. Papers and books are published upon my business. They are certainly read, or they would not be published. It pays to read them or they would not be read. They are read by mechanics; no one else cares for them. I am a mechanic. I shall read them." Commonplace sort of reasoning is this. A great many *reason* thus, too, yet comparatively few *practice* thus.

Now every maxim of this kind which is applicable to any business is applicable to our profession. You have seen asses in the highest and most desirable positions. They are *not* asses. They are sharp. They are on the move continually. They are here and there, everywhere. They hear of a teacher's meeting. They make some sacrifice to attend it. There they make the acquaintance of others. There they strike new atmospheres of thought. There they compare themselves with other men in better circumstances, and make the discovery that they are just as good and capable as they. There they learn of other positions. They don't apply by letter. They *go for* those positions even if it cost somewhat, and failure meets them occasionally. They have learned that such positions are reached and held only by laborious preparation. They have made and are always making such preparation. They began it by subscribing for an educational perhaps. They learned in that educational of new publications on teaching and upon subjects taught. They studied them. They conversed about them with their fellow teachers at associations. They wrote essays upon them or upon subjects suggested by them for educational journals. They practiced at the first opportunity any practical suggestions. They tested and experimented patiently and thoroughly. They proved all things, threw away the worthless and held fast to the good. They studied their own experience and profited by it, never failing twice by the same cause. They studied their work, originated plans, tested them, adopted or rejected them according to their success

or failure. They were forever on the lookout in their own fields in the fields of others, in their own minds in the minds of others, searching every channel, examining every authority, testing every improvement. They are not asses; they are on the lookout. —The National Normal.

SELF INVESTIGATION.

BY WINFIELD SCOTT, OHIO.

The teacher of my ideal is one that will be prized in any district, and welcomed among any people. He needs not be a Plato in learning, or a Sampson in physical strength; neither a Cæsar controlling by fear, nor a Cicero captivating by eloquence; yet, his knowledge must extend beyond the branches to be taught; his physical strength be of sufficient might to prosecute his labors; his firmness such as will command good government; and his language of that style which will express his ideas cogently and comprehensively. For marvelous indeed is the power of language when expressed in a clear articulate tone, with perfect arrangement, and accompanied with the true expression of the soul.

The chief characteristic of my ideal teacher is self investigation. To investigate self was a duty highly esteemed in the school of Socrates, and in that of the great teacher Christ.

"Know thyself" was one of the ancient sayings of Greece, and ascribed to Solon, one of its wisest sages. He who by self-study is master of his passions, desires, thoughts, words, plans, and actions, has united wisdom with dignity, ready sympathy, firmness, and gentleness. No theme that morals contemplate is more satisfactory than entire self-conquest. Then, assuming that you appreciate the truth, that in self-knowledge all wisdom centers, I pass to notice the time for self-investigation. The model teacher exhibits wisdom and prudence by foreseeing trouble in the distance, and preventing the same by self-preparation. We see the honest workman sounding the wheels of the massive engine to detect the injured one, and thereby prevent the wrecking of the train. His fore-knowledge is far better than subsequent knowledge. A preventive is *always* better than a cure. In like manner the true teacher sounds his metaphysical wheels. How does he sound them? I answer, patiently, that he may not quit in despair; also, prayerfully, that it may be done correctly. When does he sound them? I answer, daily—"short settlements make long friends;" also weekly—at the close of the week, how fitting to retrospect its labors. And then monthly, quarterly, and yearly. Very propitious seasons for self-investigation are at the close of each of these periods, and he inquires of self, "What evil in the school hast thou amended? What good has thou done for thy pupils? and how art thou bettered? What is thy future ability? What are thy resources for to-morrow, next week, next month, next quarter, next year?" By these self-interrogations great and beneficent discoveries are made, and inestimable are the benefits.

The explorations of the exemplary teacher extend to his physical nature, to his intellect, which comprehends memory, imagination, association, reason, self-confidence, and self-control, and to his soul in reference to its moral state, and unconscious influence. Probably the greatest difficulty with which the teacher has to contend is self-control. History informs us that Peter the Great once struck his gardener, who, being a man of acute sensibility, took to his bed and died in a few days. Peter hearing of this, exclaimed with tears in his eyes, "Alas! I have civilized my own subjects; I have conquered other nations; yet, I have not been able to civilize or conquer myself."

When a teacher fails to civilize or conquer his school, the failure can generally be traced to the uncivilized or unconquered state of self. If his pupils are unpleasant and inclined to be noisy, their actions are often only the reflection of their model.

Be pleasant, and you will find pleasantry. Be social, and sociality will surround you. Love, and you will be loved. Self-government is evidently one of the highest ends to be reached, and one of the chief objects to be secured. Revelation, as well as reason, recognizes and enforces this truth, when it says, "He that ruleth his own spirit is greater than he who taketh a city." The poet adds further testimony to the importance of self-investigation, when he says:

"That man must wiser daily grow
Whose search is bent himself to know;
Impartially he weighs his scope,
And on firm reason founds his hope;
He tries his strength before the race,
And never seeks his own disgrace!
He knows the compass, sail, and oar,
Or never launches from the shore;
Before he builds, computes the cost,
And in no proud pursuit is lost.
He leaves the bounds of human sense,
And safely walks within the fence,
Thus conscious of his own defect,
And pride and self importance checked."

—*National Normal.*

State Teachers' Association at New Haven, 22d, 23d.

MISCELLANY.

DRAWING AS A MEANS OF MENTAL DEVELOPMENT.

The value of drawing will be best appreciated when we understand its precise nature, and the relation it sustains to other branches in the course of instruction. Drawing is a method of expressing thought, and philosophically is associated with other forms of language. Like language, it should be regarded as a means and not as an end. It is valuable as embodying thought, and as a mode of communicating thought to others; but divorced from thought, it is but a lifeless form. Picture-making may become mechanically perfect, but, unless it embodies and expresses the thought of the artist, the process is valueless in an educational point of view. Not cnly should the whole picture express a thought, but each line and mark should be necessary to ihe complete expression, or it is superfluous, and, as such, a hinderance rather than a help.

ATTENTION.

In all true educational work the primary attention should be fixed upon the thought, and the secondary on the expression. Thus, in the study of any of the sciences, when books are used, the great effort should be to understand the ideas recorded, and the words should be considered useful only as they fully express these ideas. Vagueness of expression more often results from vagueness of thought than from any lack in the use of arrangement of words, and improvements in modes of speech must come largely from a more clear comprehension of the thought involved. As drawing is but a kind of language, the primary attention should be fixed upon the form to be portrayed, while the method of representing the form should be as nearly incidental as possible. When the lines drawn are imperfect, the correction should be made by more accurate observation of the form itself, rather than calling the attention specially to the faulty expression.

OBSERVATION AND PERCEPTION.

It will be seen, then, that drawing makes a continuous demand for close and accurate observation, thus cultivating the perceptive faculties, and storing the mind with distinct ideas of form. It leads also to comparisons and nice discriminations, and fixes the attention upon real objects. When the perception is once developed by means of these exercises, activity and keenness of observation become fixed habits of mind, increasing thought, broadening culture, and enriching life.

But expression must always accompany thought. Words are used to embalm general ideas, and drawings are made to clearly define and preserve ideas of form. The hand must be trained to express what the eye perceives. Careful practice alone can accomplish this. When, after repeated trials, the lines drawn fail to represent the form desired, the difficulty will probably be found in defective observation, rather than in any fault of the muscles.

The education of the hand, so that it is brought into exact harmony with the eye, and obeys the mandate of the will instantaneously, is an educational achievement of immense importance in all the vocations of life, The effort to express also corrects observation, and thus perception and expression mutually act and react, stimulating, criticising, and correcting each other.

IMAGINATION AND REASON.

Not only does drawing assist in the cultivation of perception, but it may also be made an important auxiliary in the development of the higher faculties. In all of the inventive work of drawing, the imagination is brought into active exercise, and perhaps no better schoolwork was ever devised for that purpose. The first efforts at invention may prove failures, from the fact that imagination has not been awakened. The mind has been accustomed to move along the path of the real, imitating and accepting without any effort at rearrangement or new combination. The creative energies of the mind have not been called into action. Thought remains under the domain of the senses, and is confined to that which is visible. But by simple and progressive steps the mind is led away from the actual and toward the ideal. By the judicious instruction of the teacher and the stimulus of example, the imagination is at last aroused. The possibility of creating new figures and designs becomes a living reality. The newly-acquired consciousness of power to do, stimulates the mind to greater activity, and leads it to higher achievement.

The imagination, however, which concerns itself with rearrangements without regard to order, must be directed so that the new combinations may produce definite results. The designs produced should be orderly, harmonious, and symmetrical. The faculty which perceives the relations upon which these qualities are founded, and which directs and controls the imagination, is reason. Every drawing-lesson, then, may be made to fulfill the highest function of school-recitations, that of bringing into active use all the powers and faculties of the mind, in their natural order.

To produce these results by drawing exercises, the inventive and applied courses are both indispensable. If the inventive work is omitted, little or no exercise is given to the imagination; and merely copying pictures which others have drawn, fails to bring into active use the higher powers of the mind. If the applied course is omitted, the imagination is not brought under the wholesome control of reason, and made to conform to the actual, but runs riot and wastes itself in objectless pursuit.

CONCEPTION.

In its full development, the mind must have the

power to form mental images of things unseen. It must vividly recall the actual, and as vividly construct mental pictures of the ideal formed by rearranging the elements of the actual. This process, combining vivid perception and recollection with imagination, is known as conception, and the picture so formed is called a concept. By drawing, we obtain more vivid concepts of form than by any other means. The effort to represent corrects errors of perception, errors of recollection, and errors of imagination; and, when the drawing is perfected, the concept stands out clear and sharply defined. The mental act of thus defining concepts in the concrete becomes a confirmed habit of the mind which extends to every possible department of thought.

TASTE.

In the construction of a design or a picture, and in the arrangement of its parts, certain laws in regard to proportion, harmony, and symmetry, must be observed, to produce a pleasing effect. By exercise, and without a knowlege of the laws upon which the true order rests, the eye may learn to distinguish with great accuracy the correct from the incorrect, the true from the false. This perception of the true order of things by an intuitive or empiric process we call taste. Taste arrives at results without resort to reasoning, and, when cultivated and emancipated from the control of custom or prejudice, its decisions will generally be found to correspond with law. It is an elevating and refining influences tending to beautify and enrich life, and to soften the asperities of social intercourse.

Taste is directly cultivated by drawing. The eye, trained to definite and accurate observation, becomes conscious of the natural and true order; and the hand trained to execute, reproduces this order in all its exactness. Taste, cultivated in regard to form, leads to the observation of good taste in the arrangement of things, in the use of language, and in social manners.

—Krüsi's Analytical Manual.

NEW LIFE IN EGYPT.

While public attention is engrossed with the events of Western and Central Europe—with the conflicts of parties in France, the struggle with rebellion in Spain, the proceedings of Bismarck against the bishops in Germany—a great African power is being quietly built up on the banks of the Nile and the Mediterranean. It is only now and then that we hear mention of Egypt, and, when we do, it is oftener that reference is made to its antiquities, to the remains or history of the older Egypt, than to its present condition, and its recent rapid strides in material civilization and military power. Every now and then there is a "misunderstanding" between the Egyptian viceroy and his nominal lord, the Grand Turk; the latter objects to the increase of the Egyptian army or navy, or to some action on the part of the viceroy which too plainly asserts his intention to be independent; and, on every such occasion, the viceroy appears to approach a step nearer to the independence he is evidently aiming at.

Ismaïl Pasha, indeed, is no ordinary man. An Egyptian and a Mohammedan by birth, he is European in education, tastes, and aspirations. He was brought up in France, and spent his youth in the midst of Western civilization. Since his accession to the khédivate he has been gradually loosening the ties which have still bound Egypt in subjection to the Turkish sultan; and, under his vigorous sway, the land of the Ptolemies, the Pharaohs, and the Rameses, has been fast rising to the dignity of a considerable and stable power.

He has ceaselessly pushed railway enterprises, and at this moment a great line is in the process of construction up the Nile Valley, which is destined to penetrate far into the heart of Equatorial Africa; it will not be long, perhaps, before "Cook's tourists" will be taking coupon-tickets for the Albert Nyanza *via* Khartoum. Ismaïl, less warlike and savage than Mehemet Ali, has devoted himself without rest to these two objects—independence of the Porte, and internal development. He has managed, by bribery and cajolery, to obtain from the sultan freedom of internal administration, the right to increase his army and navy, and to make treaties with foreign powers, and the alteration of succession, so that his son becomes heir to the khédivate. He has thoroughly reformed his civil service, and has freely employed Europeans and Americans as heads of bureaus, army officers, supervisors of public works, and confidential advisers.

It seems as if civilization, having passed around the world, and reached its limits on the American shores of the Pacific, had begun to return again to its ancient seats in the Orient, to the localities of its remote infancy. There is something romantic in the idea that Egypt, under a succession of enlightened and vigorous viceroys like Ismaïl Pasha, may become once more a great military power, and a renowned home of the arts. Will Alexandria again be a commercial port, rivaling those of the Atlantic coast; and will the now squalid and effluvious Cairo be revived into another Memphis? For Egypt is already the chief promoter of African conquest. Her territories are gradually broadening southward. Should her prosperity and increase of wealth and power continue, Abyssinia will in time be hers, and, likely enough, the other vast and savage countries lying along the east coast of the continent.

In one respect, however, Ismaïl Pasha betrays a truly Oriental perfidy and immortality. He keeps the *fellahs* in their ancient condition of abject servitude and ignorance; and, while pretending to acquiesce in the abolition of the barbarous slave-traffic in which his subjects engage, he refuses either to actually suppress it, or to allow such English crusaders as Sir Samuel Baker and Colonel Stanton to give it the *coup de grace*, which, with his hearty coöperation, they might do without great diffi-

culty. There is no quarter of the world—not even Zanzibar or the Australasian Islands—where the slave-traffic is carried on more audaciously, openly, and barbarously, than on the northern confines of Ismaïl Pasha's dominions; and it is gratifying to learn that England, in her benevolent character of universal suppressor of the slave-trade, has resolved to leave no effort untried to abolish it.

Once freed of this evil, and the *fellahs* once accorded the condition which the Russian serfs, thanks to Alexander II., have attained, there seems to be no reason why Egypt should not in a very few years take high and independent rank among the powers. Tne Egyptians are really a deft and capable people, and probably only need freedom from Turkish control, and an extended period of vigorous government like that of Ismaïl, to clearly betray their superiority to their African and Asiatic neighbors. —Ed. Table, Appleton's Journal.

THE LAWS OF STORMS.

The simultaneous observations in regard to the weather made for some years under the direction of the Weather Bureau, their transmission by telegraph to a central office in Washington, and their scrutinous consideration by a competent *corps* of scientific employes, have resulted in the knowledge of the storms which appear to govern storms on the North American continent, but which of course will differ to a certain extent for other parts of the globe. There are general laws applicable to the whole terrestrial surface, and special laws applicable to certain regions. The general laws are:

1st. The invariable course of air currents or wind is such as tends to an equalization of the atmospheric pressure upon the earth's surface; so soon as, by some cause or other, an inequality has been developed in this pressure, the air is set in motion in order to find, as it were, its level, just as water or any other fluid will do, and we will have wind.

2d. This wind will blow directly or oblique toward the region where the atmospheric pressure is the lowest, that is, where the hight of the barometric column is at a minimum, coming for a distance of several hundred miles from the locality where the atmospheric pressure is the highest, or the hight of the barometer is at a maximum.

3d. The force of this wind is in direct proportion to the suddenness and amount of the depression of the barometer.

4th. In all great and sudden depressions of the barometer there is much rain or snow, according as the temperature is above or below 32°; and inversely, all sudden great rains and snows are accompanied and preceded by great barometric depressions.

5th. The maximum of these depressions are in the center of the storm, while beyond its borders the barometer is high or rising.

6th. The centers of storms are straight or curved lines of various extent, from a hundred to a thousand or more miles in length, while their general direction is determined by the geographical features of the localities, differing thus for different continents, but generally following the same law for every region of the globe.

7th. These linear centers of storms travel forward independently of the various wind courses around them, nearly at right angles to their direction; or, in other words, the elongated storm region travels forward side foremost.

8th. In the temperate zones the direction of those linear storm centers is generally from north to south, while the direction of their progress is from west to east, being displaced with an average velocity of thirty-six miles per hour.

Note.—This must not be understood to mean that the air moves with that velocity. The air around the storm center moves with different velocities and in different directions, while in the storm center there may be a lull of wind, and sometimes even a perfect calm; but it is this calm, with the agitated currents around, which is transmitted eastward like a wave, unless the air itself take part in the progressive eastward motion.

9th. Consequently storm waves will be accompanied by a depression of the barometer near the central line of the storm, and a rise of the barometer in its front and rear.

10th. When the line of minimum pressure passes a locality toward the east, the east wind before prevailing changes to a west, and the barometer commences to rise. This is a consequence of general laws.

11th. There is generally but little wind near the line of maximum pressure, and on each side of that line the winds are irregular, but tend outward from the same.

The special laws for the United States, as far as observations have revealed them, are:

12th. Most storms commence in the "far West," beyond our most western observers, and their origin has to be studied in the future by observers on the islands in the Pacific Ocean; but some storms commence in the United States, especially in the Rocky Mountains, in which case the line of low pressure originates there and travels eastward with the storm.

13th. The line of minimum pressure is generally more or less curved, with its convex side toward the east.

14th. The length of this line and surrounding storm extends sometimes to an unknown length north and south, reaching far beyond our observers on the Gulf of Mexico, and on the northern lakes, while its width from west to east is comparatively small.

15th. The velocity of eastward transmission of the central storm line is such that it travels from the Mississippi to the Connecticut river in about twenty-four hours, and from there to St. Johns, Newfoundlond, in the same time.

16th. Therefore when the barometer falls suddenly at the Connecticut river, it is rising simultaneously in the Mississippi valley, where the storm is leaving, and will rise and afterward descend in Newfoundland, where it is to be expected.

17th. The northern part of a storm travels generally more rapidly eastward than the southern part, wherefore the central storm line which first may have had a northwesterly direction, will finally acquire a direction toward the northeast.

Note.—Remember that this does not mean the direction of the wind, but the position of the central line of calm. In the northern parts of the United States during great storms, the wind sets in from the north of east and terminates from the north of west; in the southern parts the winds set in from the south of east and terminate from the south of west. This is the case in those storms where the central lines does not extend beyond our boundaries, and is a consequence of the general law explained in No. 2.

18th. The fluctuations of the barometer are greater in the northern and western parts of the United States than in the south and east.

19th. During the passage of storms the change of the direction of the wind from east to west is by the south; this is especially the case in the Southern States.

20th. During the high barometer preceding a storm, it is generally clear, especially if very cold.

21st. The temperature generally falls suddenly on the passage of the center of great storms; while sometimes when a storm is in the middle of the United States, the lowest temperature of the month will be in the "far West" on the same day that the highest temperature is in the east.

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We can assure our readers that with the knowledge of the above laws, the reading of the daily published probabilities, the possession of a barometer and thermometer, and their observation, as well as that of the wind and cloud directions, they may make weather predictions generally very reliable and often of great service when traveling excursions are proposed, which never should be undertaken without previous reflection in regard to the weather probabilities.

—Manufacturer and Builder.

ANCIENT TROY.

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The Troy *Times* prints the following extract from a letter from Dr. Schliemann to a gentleman of that city:

"It will, no doubt, be interesting to you and to our honored friend, Professor North, to hear that Prof. H. Gomperz, in Vienna, has already succeeded in deciphering ten of my Trojan inscriptions, all of which are in very primitive Cyprian characters, but contain pure Greek words. Thus the important fact is established that the Trojans spoke Greek. But the chronology of these monuments, as well as of all objects which came from the burnt city in from twenty three to thirty-three feet below the surface, is now generally acknowledged to be between one thousand eight hundred and two thousand before Christ, whilst the Homeric hymns cannot be older than nine hundred years before Christ. But Troy's tragical fate had remained in fresh memory, for it was sung by numerous rhapsodists, and probably by hundreds of them before Homer, whose poems alone were preserved because they were the most sublime and perfect. Troy was rebuilt, and ten feet above the ruins of the ancient Ilion you find a posterior prehistoric city, which must also have been destroyed, for like in Troy and like in Pompeii, you can dig up there the skeleton of every house.

"In the Egyptian poem of Pentasus, which dates from the fifteenth century before Christ, the Trojans of Ilion are described as fighting against Ramases I., the Sesostris of the Greeks, whilst in the sculptures of Medinet-Abou at Thebes (Egypt), which date from the end of the fourteenth or the beginning of the thirteenth century before Christ, the Trojans still appear as one of the most powerful nations of the coasts of the Mediterranean; but all these Trojans must derive from the prehistoric city which you find in thirteen to twenty-three feet below the surface, on the top of Troy. No doubt the site of Troy had been abandoned and uninhabited for centuries before the age of Homer, for the objects, and particularly the idols, found even in the highest prehistoric layers of ruins, show an immense difference in age when compared with those described by Homer; besides, the latter continually speaks of iron, whereas I never found a trace of iron in any one of the four prehistoric cities of Troy, and not even in the uppermost, which just precedes the Ilium of the Greek colony.

"John Murray, of London, who is well-known by his guide-books for travelers, is now going to publish my work on Troy in an English dress, and with, I think, all my two hundred and eighteen tablets, which he has got beautifully engraved. I trust this English translation will be well received all over the globe, for the world's enthusiasm for the Homeric songs will never subside as long as our planet is inhabited by men."

The *Times* adds: "In this connection we may state that we have information to the effect that a plan of settlement has been agreed upon between Dr. Schliemann and the Turkish government, by which the former is to pay over to the barbarians one half of the value of the treasure taken from the site of ancient Troy. Three experts have been chosen to make estimates of the value of the interest thus conceded to the Turkish government, and as soon as their report is made Dr. Schliemann will settle the demand and come into undisputed possession of his treasures, which he values above all price."

"A TWISTER A-TWISTING."

THE REV. DR. HATFIELD'S EXPLANATION OF THE WAY IN WHICH AN ENGLISH DOCTOR OF DIVINITY PUT DOWN A FRENCHMAN.

To the Editors of the Evening Post:

The lines to which your correspondent "S. B." refers, in the *Evening Post* of September 4, were written more than two hundred years ago. They are from the pen of Rev. John Wallis, D.D. (1616—1703), the learned professor of Geometry in the University of Oxford during the "Commonwealth" period. He was not less distinguished for his etymological than his geometrical skill. He took great pride in his native tongue, and peculiar pleasure in exhibiting its superiority over all others, ancient and modern.

In conversation with a learned Frenchman, near the close of the year 1653, the latter having boasted of the richness and copiousness of his own tongue, particularly in derivatives and synonyms, Dr. Wallis challenged him to a comparison of the two in these particulars. The Frenchman then produced the following tetrastich on the art of rope-making:

"Quand un cordier, cordant, veult corder une corde,
Pour sa corde corder, trois cordons il accorde;
Mais, si un des cordons de la corde decorde,
Le cordon decordant fait decorder la corde."

In response Dr. Wallis, not to be outdone by his foreign friend, instantly produced in the same meter the following literal translation of the Frenchman's labored translation:

"When a twister, a twisting, will twist him a twist,
For the twisting of his twist, he three twines doth intwist;
But, if one of the twines of the twist do untwist,
The twine that untwisteth, untwisteth the twist."

The Frenchman having thus been completely matched in every particular—in the parts of speech and in the number, quantity and force of the radical word and its inflections—was challenged to a further trial of the copiousness and flexibility of the rival tongues, but confessed that he had nothing more to offer. Whereupon Dr. Wallis exultingly produced the following continuation of the theme:

"Untwisting the twine that untwisted between,
He twirls with his twister the two in a twine;
Then twice having twisted the twines of the twine,
He twitcheth the twine he had twined, in twain."

Having thus shown satisfactorily the wonderful versatility of his own vernacular, and completely silenced his friendly disputant, and to convince him that the rich mine of "English undefiled" was not yet exhausted, he presently produced a third quatrain, in which, as before, he rang the changes on the same word, confining himself still to the allowed and legitimate inflections and derivatives of the one root:

"The twain that in twining before in the twine,
As twins were intwisted, he now doth untwine;
Twixt the twain intertwisting, a twine more between,
He, twirling his twister, makes a twist of the twine."

The Frenchman, of course, yielded the palm gracefully to his opponent. He could not but admire a language that he had but just disparaged, and of whose wonderful resources he had previously had not the slightest conception.

At the request of a foreign nobleman, subsequently, Dr. Wallis translated his three quatrains into as concise a Latin version as he could. I need not reproduce the result. It required 144 Latin words, derived from twenty different radicals, to express the 109 English words springing, with the exception of the particles, from one and the same root.

E. F. HATFIELD.

NEW YORK, September 8, 1874.

THE WAVE'S CONFESSION.*

BY B. G. (AGE, 14.)

The summer day was near its close,
The sunset rays had painted with rose
The waves that ever, ever flow
In their ceaseless rounds and come and go:

As I sat upon the sandy beach,
Just away from the water's reach,
Thinking of friends and home,
I seemed to hear a soft, low tone.

I started, and looked, but no one was near;
Then again I listened, and again did hear
That tone so sweet and low, as before;
It seemed to come from the sea-girt shore.

As I with fear and wonder sat—
For it might be this or it might be that—
I presently saw what the mystery was,
And if you will listen, will tell you the cause.

'Twas a little wave thus talking to me,
As slowly it drifted in from the sea;
And this was the story to me it told,
As nearer and nearer my feet it rolled:

"O lady, the reason I came so slow
Is because I bear a tale of woe;
For a wicked, wicked deed did I
That often makes me weep and sigh.

"The night was stormy, drear, and dark,
When all at once I saw a bark
Riding on the wild, wild sea,
And nearer and nearer it came to me.

"The noble ship a leak had sprung.
And I heard a voice over the waters flung:
'*We cannot help our ship so brave—*
To the boats, and try your lives to save.'

"In a moment more they launched the boat,
But the sea was so heavy it could not float;
It went down into the waves so dark,
And a cry of horror arose from the bark.

"'There's but *one* more boat!' did the captain say;
And quickly I swept that away;
Then all on board stood still with fear,
For they saw that death was drawing near.

[* As the muses, apparently, are not on intimate terms with our *teachers*, we are happy to give the "Poet's Corner" this month to a *pupil* in one of our schools, who evidently is somewhat favored with their companionship.—*Eds. Sch. Jour.*]

"Then some did shriek, and curse, and cry;
A few there were did not even sigh,
But stood from the raving crowd apart,
And each in prayer lifted up his heart.

"Among those standing thus apart
Praying from their inmost heart,
Were two—a sister and a brother—
With their soft arms clasped around each other.

"'Sister,' said he, soft and low,
'Shall we stay or shall we go?
There is a chance, though very rare,
That there may be land out there."

"'We shall die if we stay here;'
She said in a voice so sweet and clear.
'Robert, you can swim, you know:
I think you had better go.'

"'Go and leave you? O no, never!
Even death shall not us sever.'
'Then we'll go,' she softly said;
He, in answer, bowed his head.

"Then off they sprang from the vessel's side
Into the boiling, seething tide;
And the boy, so brave and strong,
Bore the sinking girl along.

"Shall I tell you, lady, oh!
Of the cruel tale of woe;
How when they nearly reached the land—
For it was very close at hand—

"Cruel, crawling. *wicked* I,
Who was then a wave so high,
Came upon them, *not* to save,
But gave them each a watery grave?

* * * * *

"I will tell you one thing more:
Not one in that ship ever reached the shore;
But all now sleep beneath the waves,
In their lonely, cold, dark, ocean graves."

As the wave these sad words spoke,
Softly at my feet it broke;
Then receding toward the sea
Murmured back "Good-bye" to me.

PROTECTING INFLUENCE OF THE EARTH'S ATMOSPHERE.—Weilman, after reducing the hourly observations made at Berne, Switzerland, for several years, and deducing therefrom the laws of diurnal change of temperature, has investigated the influence of cloudiness on the daily variation, especially at night. He finds that the radiating power of the earth's surface is everywhere and at all times the same. The temperature in the morning is, he finds, in cloudy weather five or six degrees higher than in clear weather. And, again, that the simple atmosphere of the earth surrounds it like a protecting layer of clouds, and that without this the earth would experience daily an enormous variation in temperature. Even the clear sky, or rather the moisture present as an invisible vapor, protects the earth with an efficiency equal to about one-third of that exerted by a layer of clouds, against too strong a daily change of temperature.

THE CONN. SCHOOL JOURNAL.

Office, No. 7 Insurance Building, opposite Park.

NEW HAVEN, CONN., OCTOBER, 1874.

EDITORIAL.

WE call attention to the notice in another column of the twenty-eighth annual meeting of the State Teachers' Association. The president of the Association, Mr. H. C. Davis, has taken much pains in various judicious ways, to provide profitable exercises for the occasion. The programme presents a lively set of subjects, to be treated by lively speakers; and there are a sufficient number of gaps left to be filled up by those that feel lively enough to take part in discussions, to add thus the exquisite seasoning to the regular viands provided.

The officers of the Association have done their part handsomely (and an onerous and somewhat thankless part it is); now let us, who form the rank and file, do ours, by mustering in force. We all have many things to learn, and probably every live teacher that attends the meeting in New Haven, unless he has already attained the very perfectness of perfection, will come away with at least one idea gained which will be worth the expense of time and money, And let those who have no need to gain ideas in their profession, go for the purpose of imparting to others somewhat out of their surfeited experience.

MUCH injury has been done by the sweeping assertions of the popular proverbs accepted with world-wide currency. A great mischief-maker among teachers is that pert, little, old adage, that "a little learning is a dangerous thing." Its only legitimate duty is to prick the swelling bubble of tyronic vanity; but when, in these days of the wondrous interlacing of the labors of research, it warns away the seekers after truth, the souls yearning for rich culture, and especially teachers of our youth from those enticing fields of thought where only the rudiments would be possible to them, then it is a reckless lance which must be shivered into a thousand fragments. Instead of being mischievous and dangerous, rudimentary knowledge is in a large sense more practical, and more directly and widely useful, than that which is profound. Your profound scholar is a "rara avis," and generally perched up on some sedentary roost at that; from the very nature of the case he reaches but few of

the masses, and then in too external a way to be very influential; but those whose knowledge is rudimentary are legion; they are mingling daily with the masses on their own level, and applying to the needs of humanity those elementary principles which higher scholars have elaborated.

An acquaintance with only the elementary principles of a science is often of value beyond price. It should never inflate its possessor, or make him imagine that he has done anything beyond what is very ordinary; but it should make him feel that he has invested in a stock which pays rich dividends though it cost him little.

An elementary study of Latin which has revealed but a glimmer of the grandeur of Cicero's tongue, will put into the grasp of a man, a leverage on our own language, which money would not induce him to throw away. A knowledge of the leading principles of Botany, Zoology, Physiology, Psychology, etc., is no empty acquisition; but infallibly puts one on a higher plane of culture and practical usefulness.

While perfecting themselves mainly in the leading branches of their work, teachers will do well to stroll frequently inside the gates of other sciences within which they never expect to be really at home.

We invite the attention of our readers to the extract in another column from the introduction to Hailman's "Twelve Lectures on the History of Pedagogy." That is a study which has been altogether too much neglected by teachers, to the great injury of themselves and of the educational interests of our people.

What would be thought of one who, proposing to become a chemist, should refuse to make himself acquainted with the principles of that science already discovered and established by the researches and experiments of those who have preceded him? How much time and working force and material must be necessarily wasted in learning what has already been learned over and over again, by the costly experience of hundreds! What a treasure of scientific knowledge, originally costing untold sweat and toil, is now to be had for a few hours or days of reading!

Would not he be justly considered a dolt, who, desiring to become a manufacturer of fine pottery, should refuse or neglect to learn what he could of the art as practiced hitherto, preferring to begin his experiments unaided by the wisdom of others? What would the world think of the sanity of him who should hope or expect to rival the creations of a Titian or an Angelo, and yet neglect or refuse any opportunity he might possibly gain of studying their work! The chances are that the would-be *original* worker in either of these cases would be but a sorry workman at the best, and waste the chief part of his energies in efforts tending to necessarily indifferent success, or certain failure.

He would be just as wise as those teachers who neglect to prepare themselves for their profession by a careful study of the principles of education established by the master spirits of the art of teaching. Nay, more; while *he* is a fool, they are criminally reckless as well as foolish, since they not only waste their own powers but destroy the minds and souls of those who are entrusted to them for development and culture.

He or she who is utterly ignorant of the principles of Froebel or Pestalozzi, has no right to enter the school-room as a teacher.

Again: The man who is pursuing the study of any science or the practice of any art requiring knowledge and skill, is either a conceited egotist or a spiritless drone, if he neglects to read the current records of the labors and opinions of other workers in the same field; or if he disdains those meetings and conventions where they come together to compare experiences and to discuss principles and modes of working.

That class of teachers is too large even in Connecticut, who, entering the profession with no study of educational principles or pedagogic science, never rise sufficiently high in the scale of intelligence to have any interest in the literature of education, or in the meetings of teachers for improvement. To that class is mainly due the low estimate put upon the profession by the world in general, and the inadequate compensation received by the majority of those who are more deserving.

That class is destined to become smaller, we are bound to believe, as parents and school authorities appreciate the fact that mind-culture is a science and not a trick or an accident.

For some years we had lost sight of the friend of our boyhood, "The Old Farmers' Almanac, by Robt. B. Thomas," every page of which used to be read over and over, until they were forever enshrined in the heart. But here it is again for 1875, with its "Aspects," "Holidays," "Events," looking as natural as life, the very same old familiar "Weather Predictions," word for word, "riddles," "enigmas," and "charades," though not the same, just as good. Its witty anecdotes and pungent

poetic selections, its directions for grafting trees, and keeping poultry are fresh and good as ever. We used to believe it the very best almanac in the world—and we believe so still.

WHAT is more vexatious, among the pettiest of annoyances, than to receive a letter requiring an answer, and enclosing a postage stamp for the same, which stamp has been faithfully gummed full length upon the page? To release such a stamp, gum it anew, and re-stick it to your envelope is a mournful operation. Thousands of such operations must be undergone in the delivery of every day's mail. A tyro at statistics could easily show a long list of years *lost* in this stupid work of "unsticking" stamps.

To avoid this infelicity without leaving the stamp inconveniently loose, we have for years pursued a plan which we recommend for general adoption. It is to affix the article by some simple little mechanical contrivance, admitting of easy detachment. In some convenient place, say at the right hand upper corner of the letter, over the date, make a half-inch diagonal slit in the paper; into this insert a corner of the stamp; bend this corner over on the other side of the sheet, and it will go to California unmoved. A simpler, but less neat method, is to apply the stamp to the upper right-hand corner of the page, corner to corner: then fold over the two corners together in two folds, which will also, when the letter is closed, give a tight hold.

At a recent meeting of the New Jersey State Teachers' Association, a resolution in favor of the repeal of the State law prohibiting corporal punishment, was adopted by a large majority.

The vote was not intended as a recommendation of corporal punishment. Indeed, many who advocated repeal expressed themselves strongly against corporal punishment. But in the opinion of the teachers there assembled there are cases in our school where higher appeals are not available. The right of coercion can not be taken from the teacher without disastrous effects. Moreover, the existence of such a law is an unjust imputation upon the great body of the teachers, implying that they are so much given to the use of the rod that they can be restrained only by the strong arm of the law.

To the long catalogue of sins that lie at the door of teachers we must now add that of causing permanent short sight and curvature of the spine, two evils that afflict a much larger proportion of educated people than of the uneducated. At least so says Dr. Liebreich in a recent paper. We should say rather the sin of teachers consists in not preventing indulgence in those school-room habits that tend to induce these diseases.

During childhood, according to the Doctor, the eye possesses a great power of accommodating itself to distance, and if in reading and writing the desks are so arranged that the eye, instead of being twelve to fifteen inches distant, is kept at seven or eight inches from the book or paper, the eye adapts itself to the near object, and permanent short sight is the result. Moreover, as the predisposition to the disease is hereditary, short sight is constantly on the increase in highly civilized countries. The bad posture adopted at writing-desks is also the chief cause of lateral curvature of the spine. In extreme cases, says Dr. Liebreich, the copy-book is pushed forward, so that its lower border is inclined at an angle of 45 degrees with the edge of the table. The head is lowered and so much twisted that the left eye is only a few inches distant from the book; the left cheek almost touches the left hand, or even leans upon it; the ribs of the left side are pressed against the edge of the desk, and taller children slip backward on the forms, so that only the lower part of the thigh rests on the narrow bench. In many schools the pupils maintain this unnatural position for several hours daily, until at last the muscles are over-tired, and permanent distortion of the spine is the inevitable result. To avoid these evils, desks should be so constructed that when the pupil is seated the shoulders should be even, the spine straight, the head balanced on the top of the spine; the elbows on a level with each other, and only the hands and part of the form arm resting on the desk. In order to effect this, Dr. Liebreich recommends a desk in which the angle is twenty degrees, for writing; and which, by turning up a flap gives an angle of forty-five degrees, for supporting a book for reading. He strongly condemns the absurd, unanatomical notion that straight spines can be insured by making children sit up straight without support for the back, thus over-fatiguing the muscles, and producing the very effect desired to be avoided.

A citizen of Kansas complains that they have to pay a first-grade teacher $40 per month, while they can hire a man to make rails for $16 per month. Another proposes to charge teachers $5 each, for certificates to obtain money to pay the examiner. Here is a field for teachers who are blessed with the missionary spirit.

Book Notices.

Early Lessons in Natural Science. With illustrations; designed for Schools and Families. By R. E. Kremer. Published by Claxton, Remsen, & Haffelfinger, Philadelphia.

This book, by a lady author of much experience as a teacher, introduces a remarkable variety of scientific subjects, in a series of simple questions and answers. It will be found very useful indeed for object-teaching. Young teachers who wish to give their classes a general instruction in popular science, without having the time to consult a library of scientific works, will find the work here done for them in a very painstaking way. The topics treated cover the general outlines of the physical constitution of the world, and the more important animals, vegetables, and minerals. Though a system of questions and answers is used exclusively throughout the volume, it must be understood that the questions are not prepared in any such way as to *draw* out the truth from the class, but simply as conveniences in examination or review.

The work might well be improved in future editions by remedying some infelicities in its construction. Thus scientific terms are frequently introduced without any explanation, or several pages previous to explanation, and are, therefore, not understood by the class. This is the case with the word "compound," on page 14, and "gravitation," page18.

Again, there are statements which would be most naturally interpreted so as to conflict with the accepted scientific theories of to-day. Thus the statements on page 17 would not allow any foundation for the, undoubtedly correct, "atomic theory," while those on page 22 keep the "laid ghost" of "caloric" still on the stage.

Some of the definitions lack the *characteristic* element, as that of hydrogen, p. 27; and lastly, on some pages uninportant minutiæ supplant more valuable matter; for instance, the descriptions of fancy varieties of pigeons, p. 232, and of the common habits of barnyard fowls, p. 228.

The Franklin Series of Reading Books. By Hon. George S. Hillard, LL.D. The Primer, or First Reader, Second, Third, Fourth, Fifth, and Sixth Readers.

It may be true that "there is no royal road to learning," but authors and publishers are doing their best to make the common highway thereto bright and pleasant enough for a king. The young prince who would not delight to learn the art of reading from such books as these of the Franklin Series, must be a surly fellow indeed. Filled with the freshest and liveliest selections, printed on the nicest paper, with excellent, clean-cut type, and generously illustrated with engravings, every one of which is a work of art, both in design and execution, these books will not fail of a welcome from all the boys and girls who are fortunate enough to have them for school books.

These remarks apply to the whole series. To particularize: We judge that the First Reader contains nearly one hundred pictures vividly illustrating the reading-lessons, and all of a character that will interest the little learner. The Second Reader contains suggestive exercises on elementary sounds, emphasis, and inflection, and a sample lesson in sentence-making. In the Third, Fourth, and Fifth Readers difficult words are defined. The third has also an excellent drill in consonant combinations. The essay on the Principles of Position and Articulation, in the Fourth and Fifth Readers, by S. W. Mason, of the Eliot School, Boston, are worth much. The treatise on Elocution, by Prof. Mark Bailey, in the Fifth Reader, is worthy of long-continued and careful study. The fine treatise of the Voice and Gesture, by Prof. Homer B. Sprague, with 65 illustrations, is a most valuable feature of the Sixth Reader, evincing fine taste and practical knowledge on the part of the writer. A large number of first-class authors are represented in the selections for reading and speaking, and the biographies of eminent authors render the volume valuable as a book of reference. This book is hard to beat. From the long experience of Brewer & Tileston in making and publishing reading books, we had a right to expect much, and all reasonable expectations are fully met.

Anderson's Historical Series: A Junior Class History of the United States; to which are added the Declaration of Independence and the Constitution of the United States, with questions, exercises, copious notes, maps, portraits, views, etc.; 252 pages. A Grammar School History of the United Stated; with same additions as above and Washington's Farewell Address; 290 pages. A School History of England, illustrated with maps; 300 pages. By John J. Anderson, A.M. New York: Clark & Maynard.

Mr. Anderson's earlier historical works have been before the public some years and are well and favorably known. Publishers state that his series, in whole or in part, are in use in 112 cities of more than 10,000 inhabitants each, besides thousands of smaller towns and cities. The author combines the ability to perceive the essential events of history, and the power of concise statement, with a knowledge of the wants of the school and class-room. He shows his skill in the rejection of insignificant events and characters no less than in the matter selected, and in his method with the chronological and geographical features of the narrative. He teaches history and geography together, proper names are accurately pronounced, frequent and systematic reviews are provided for, and there is at the close of each book a complete *resumé* of the work arranged for topical study and recitation.

The Junior Class History is one of the most delightful little books to look into that we have seen. The Grammar School History has less space for pictorial illustrations, but the style is clear and sprightly, and it is

a pleasant book. The History of England is presented in three parts, viz.: I. Ancient Britain; II. England in the Middle Ages; III. Modern England. It contains a brief appendix on the British Constitution, and another gives a "General View of the British Empire." We can cordially commend all these books.

A Grammar of the English Language, with an Analysis of the Sentence. By John S. Hart, LL.D. Published by Eldredge & Brother, Philadelphia.

For a grammar that introduces no innovations on the common usages of grammarians of our language, we consider Professor Hart's revised work a success. It is exceedingly simple; it contains for the most part only essentials divested of useless minutiæ. It is clearly expressed, and has valuable notes of information for the teacher. As far as our acquaintance goes with the grammars of to-day (and we have no small pile of them), our present impression is to prefer Dr. Hart's to any other, if we must be confined to one, which we hope will never be the case.

We regret that the author clings so closely to the old standard ideas in these days, when we are all waiting for that progress in grammatical science of which the need is so evident. In respect to any diagram, or tabular analysis of the sentence, the book is entirely deficient, which we regard as a decided drawback.

The Language Lessons will serve fairly the purpose for which they are designed, of introducing grammatical science to young children. We regard it, however, as a mistake to occupy young children with any of the technology of grammar. Let their language exercises treat of other things than "Possessives," and "Intransitive Verbs," "Relative Pronouns," and such like. "Sufficient unto the day is the evil thereof."

A Manual of Modern and Mediæval History. By M. E. Thalheimer. Wilson, Hinkle, & Co., Cincinnati and New York. Price $2.50.

The author's "Manual of Ancient History" has met with a degree of favor rarely accorded to a history designed to be used as a text-book, and has given its author an excellent reputation as a student of history. "Mediæval and Modern History" has afforded a wider scope for the exercise of that talent for wise selection, thorough digestion, and skillful arrangement of materials which broadly distinguish both works from the majority of historical text-books.

A general history—especially if intended for the use of schools—is too apt to be a collection of bare facts and dates, grouped together in the order of time, without other principles of coherence, dry as husks, and as uninteresting to the young reader as possible. The author, though not claiming to give a philosophy of history, does furnish the student with a clew to the logical relations of the great events of the dark ages, the migration of the northen tribes, the repulse of the Saracens, the revival of the western Empire, the rise of the feudal system, and indicates their connection with the improvements in civilization, social order, language, and learning that characterize the middle ages. Mediæval history embraces about 1,000 years, ending with the close of the fifteenth century. The first 600 years of this period are styled the Dark Ages—the remaining 400 the Middle Ages. "Modern History" covers the 400 years from the discovery of America by Columbus to the present time.

We have not space to speak in detail of the many excellences of this work. It is illustrated with 12 beautiful maps, has a very full index, and is gotten up in the best style of publishers whose issues are among the handsomest in the country. It is hardly too much to say that the equal of this book in its sphere has not yet appeared.

The Building of a Brain. By Edward H. Clarke, M.D. Boston: James R. Osgood & Co.

The author of "Sex and Education" here presents us with another contribution to the discussion which has been undertaken concerning the relation of Sex to Education. Starting with the statement that "No race of human kind has yet obtained foothold upon this continent," he presses upon the attention of his reader the fact that our country and climate are hostile to the human race, as evidenced by the monuments and relics of extinct races, and by the rapid decay of the Indian races who peopled the country when the "Mayflower first cast anchor in Plymouth Bay"; and he argues that the Anglo Saxon race will fail as its predecessors have done, "unless it can produce a physique and a brain capable of meeting successfully the demands that our climate and civilization make upon it."

The work is divided into three parts: I. Nature's Working Plans; II. An Error in Female Building; III. A Glimpse at English Brain-Building.

Like his former book, this is keen, outspoken, vigorous, and the argument is fortified by abundant examples and testimonies.

Our First Hundred Years; The Life of the Republic of the United States of America. Illustrated in Four Great Periods: Colonization, Consolidation, Development, Achievement. By C. Edwards Lester, author of "The Glory and Shame of England," etc. To be complete in twelve monthly parts. U. S. Publishing Co., 13 Uuiversity Place, N. Y.

We have received Parts Two and Three (we should like to see Part One) of this work, and our impression of it is very favorable. It is said that the work will epitomize the fruits of the literary labor of the life-time of a thoroughly American author, whose writings on national topics have already given him a high reputation. It is comprehensive in its plan, treating the important events and great characters in our history in a pertinent, concise, yet withal eloquent and fascinating style. The author's heart has evidently embraced his

country and its leading spirits, and is in this work. Sold only to subscribers at 50 cents for each monthly part.

HENKLE'S TEST SPELLING-BOOK for Advanced Classes. By W. D. Henkle, late Ohio State Commissioner of Common Schools. Wilson, Hinkle, & Co., Cincinnati and New York.

If spelling ever becomes one of the "lost arts," it will not be the fault of the book-makers. We have had occasion to notice in these columns several excellent spelling-books, within a few months, and this one certainly is not far behind the best, if, indeed, it does not stand abreast of it. If any one will thoroughly master the 4,000 "test" words here selected and arranged,—their orthography and meaning—we will guarantee that he shall not do much bad spelling through life. The bringing together of many groups of homophonous words, as bays, beys, baize, soul, sole, sol, Soule, sense, scents, cense, cents, Neagh, née, nay, Ney,—is a good feature. Author and publisher have done their work well; now let teacher and pupil do theirs.

FIRST STEPS IN SPELLING. By Lewis B. Monroe. Published by Cowperthwait & Co., Philadelphia.

THE NEW PRACTICAL SPELLER. By N. D. Wolfard. Geo. E. Stevens & Co., Cincinnati.

The first of these books is a very attractive and excellent little speller. No teacher will regret ordering it.

The second is somewhat near to the opposite of excellent. Aiming to strike out in a new track, it fails to win success. As a specimen of its accuracy we quote: "James D. Dana *was* an American geologist." What, then, is he now? if we might inquire.

Appleton's Science Monthly for September furnishes a very attractive variety of scientific instructions. It opens with a full paper on the "Natural History of Man," by Professor De Quatrefages, while near the close of the number are some masterly thoughts by Prof. J. P. Cooke on "The Nobility of Knowledge." Sandwiched in between these are: "The Photosphere and Sun Spots," "Ferments, Fermentations, and Like," "Bird of Paradise" (with which lady readers will be especially pleased) and other papers of interest.

The Galaxy continues its fascinating narration, "Life on the Plains," by Gen. G. A. Custer, and "Linley Rochford," by Justin McCarthy. A group of interesting reminiscences will be found in "The Romance of the Holland House." Reclus's trenchant articles on Marshall McMahon are very timely, and will attract much attention.

Harper's Monthly is as sprightly as ever. All its attractions of pencil and pen which have established its popularity during so many years, still fill its pages with unabated success. It would be a dull house which never welcomed Harper's Magazine.

Scribner's Monthly has a pleasing character of its own. It sustains through each monthly issue its high tone of literary culture. A fine variety of improving articles is furnished in its general department, while the various "drawers" of editorial departments are unusually good reading. The reader may always be sure of an instructive treatment of the topics of the day.

BOOKS RECEIVED.

"Manual of Mythology: Greek and Roman, Norse, and Old German, Hindoo and Egyptian Mythology." By Alexander S. Murray, Department of Greek and Roman Antiquities, British Museum. Second Edition, re-written and considerably enlarged; with forty-five plates; $2.25. New York: Scribner, Armstrong, & Co.

"An Address before the Association of the Graduates of the United States Military Academy." Annual Reunion June 11, 1874. By Prof. Charles Davies.

"Dedication of Conncil Hall, Oberlin Theological Seminary, Aug. 1, 1874."

"Twenty-eighth Semi-Annual Report of the Superintendent of Public Schools of the City of Boston."

"Guide to the Primary Drawing Block." Published by Strobridge & Co., Cincinnati, O.

"Forbridgers' Patent Drawing Tables, prepared for Use in Public Schools." Strobridge & Co., publishers, Cincinnati, O.

"A National University." Review of the paper read before the Higher Department of the National Educational Association at Elmira, N. Y., Aug. 5, 1873, by Charles W. Eliot, LL.D., President of Harvard College. By John W. Hoyt. Read at Detroit Meeting, August 5, 1874.

"Monthly Report of the Department of Agriculture for August and September, 1874.

"Annual Register of the Rensselaer Polytechnic Institute, Troy, N. Y., 1874."

"Catalogue of the School of Modern Languages in Boston." Ninth Year, 1874–1875. Cambridge: Press of John Wilson & Son.

ANNALS OF EDUCATION.

CHICAGO. — The report of Superintendent Pickard claims, as the result of the trial for the second year of the abolition of corporal punishment, that: 1st, *Order* is as good as ever before; 2d, *Obedience* is prompt and cheerful; 3d, *Maliciousness* less than ever before; 4th, *Suspensions for Misconduct* are only about one-half what they have been in the best of former years.

THE TERITORIES. — From the American Educational Annual, Vol. I., for 1875, published by J. W. Schermerhorn & Co., we gather the following

items. We shall have a word to say of the "Annual" hereafter. In the mean time we commend it to every school officer:

ALASKA.—Whole population 30,000, viz.: 7,000 Aleutians on the islands, 11,000 Coloshes on the coast and the remaining portion scattered over the territory in wandering tribes. The Aleutians live in villages of from a few families to 500 or 600 persons. For the last thirty years they have had priests of the Greek church, educated, to some extent, to minister to their spiritual wants. These have so far taught the people that most of them understand the service in Russian, can manage their accounts, and transact business successfully. The Coloshes have a tribal organization and little or no education. The priests scattered through the different villages are all natives, under a Russian bishop, and were educated in a school established by the Russian government at Sitka. Since the country came into possession of the United States, that and all the schools under Russian control have ceased operations, and there is yet no law under which any community or group of families may organize themselves for the support of schools. At Sitka, however, the necessity for some civil organization has been so great that, even without a law to authorize it, the citizens have settled themselves into a voluntary committee, elected certain officers, and established an English school.

ARIZONA.—Number of children between six and twenty-one, 1,660. Number attending public schools, 343. The Superintendent of Education writes (July, 1874): "We now have free schools in every district in the Territory, and although much opposition has been and is encountered by those who prefer the education of children under church rule, still the system of free schools is popular with the people, and I do not believe it will ever be allowed to languish." Total expenditures for education the past year, $11,060.12,

COLORADO.—Schoolhouses, 130; value of the same, $300,000; school children, 16,000; in school, 8,000; teachers, 252. Graded schools are established in the large districts, and high schools in the cities. The scholarship of the pupils will compare favorably with that of pupils generally. There are twenty-five county superintendents. Twenty-five county institutes were held during the year 1873.

DAKOTAH.—The Territorial Superintendent of Instruction is elected for two years, receives an annual salary of $600, and is allowed 600 more for a deputy. He grants teachers' certificates for the whole Territory, selects the text books, and holds in connection with the County Superintendent an annual Teachers' Institute of three or four days. School districts in the Territory, 200; children of school age (5 to 21), 6,312; in the public schools, 4,006; total expenditure (annually) for schools, $21,747.62.

IDAHO.—At a meeting held at Boise City in June, 1874, Governor Bennett presiding, the necessary steps were taken for the establishment of a university. There are now in Boise City three private schools, one under the direction of the Episcopal Church, the other two under the control of lady teachers. There is a fourth school under the direction of the Superintendent of Public Instruction, where French alone is taught.

Number of school districts, 54; children between 5 and 25, 3,233; enrolled in schools, 2,196; expended for school purposes during the year, $27,-181.60.

INDIAN TERRITORY.— According to the latest statistics the Indian communities in the territory number together 68,505. The Cherokees, Choctaws, Creeks, Chickasaws, and Seminoles, each provide by law for the establishment of district schools, as well as others of a higher character. There is a Superintendent of Schools elected or appointed in each nation. The public schools are divided into three grades, viz.: Grammar, intermediate, and primary schools. There are three directors for each school.

The Superintendent writes: "We have now sixty-eight public schools, taught principally by natives. The children speak their vernacular language, and I have introduced object-teaching among them, it being a good way to teach them English. The language is not akin to any known language on the globe."

The Choctaws and Chickasaws have two boarding schools and forty-eight neighborhood day-schools. Thirty-six of these are sustained by the Choctaws at a cost of $36,500 per annum, and fourteen by the Chickasaws, at a cost of less than $40,000. The Creeks have thirty-one day schools, costing $14,258, and attended last year by 860 pupils. The annual interest of the various school funds is $161,889.21.

A. S. BARNES & Co. propose soon to commence the publication of a monthly school journal entitled the *National Teachers' Monthly.* It is to be edited by Jere. Mahony, Esq., the former editor and proprietor of the *Chicago Teacher.* The publishers as-

pire to a subscription list of 50,000. The first number may be expected soon.

W. D. Henkle, of Salem, Ohio, is about to issue a new paper—*Educational Notes and Queries*—to be a sixteen-page octavo, published monthly, except in July and August.

The School Bulletin is the name of a new educational monthly paper, published at Albany, N. Y. Educational *news* is to be a specialty.

A new educational monthly, the *Kansas School Journal*, is to be published at Topeka, Kas. It is to be a sixteen-page quarto, of the size and shape of the CONNECTICUT SCHOOL JOURNAL.

The Educational News is a new enterprise, edited by Geo. M. Gage, of St. Paul, published in Chicago.

The National Normal, of Cincinnati, Ohio, is merged in the *National Teacher*, published by Hon. E. E. White, at Columbus, O.

Twenty-Eighth Annual Meeting

OF THE

Connecticut State Teachers' Association,

AT NEW HAVEN,

THURSDAY AND FRIDAY, OCT. 22 AND 23.

PROGRAMME OF EXERCISES.

Thursday Evening, Oct. 22.

7.30. Organization.

8.00. Address, by P. A. Chadbourne, LL D., President of Williams College. Subject: "Waste of Labor in the Work of Education."

Friday, Oct. 23.

9.00 A. M. Opening exercises; after which the Association will divide into Sections.

SECTION I.

Presiding Officer—T. W. T. CURTIS, *New Haven.*

9.30 A. M. "What Range of Studies should our Public Schools embrace?" by Park Hill, Principal of High School, Bridgeport.

10.15 A. M. "Study of Natural Sciences in the High School;" by S. B. Frost, Principal of High School, Danielsonville.

11.00 A. M. "Course of Study Preparatory to College;" by Noah Porter, LL.D., President of Yale College.

2.00 P. M. "The Lecture *vs.* the Text Book;" by E. C. Winslow, Principal of Morgan School, Clinton.

SECTION II.

Presiding Officer—M. S. CROSBY, *Waterbury.*

9.30. A. M. "The Sanitary Condition of the School—how should it be provided for?" by F. A. Brackett, Principal of Barnum School, Bridgeport.

10.15 A. M. "The High Pressure System in American Public Schools;" by George R. Burton, Principal of Washington School, New Haven.

11.00 A. M. Discussion: "The employment of Monitors in the discipline of a School;" opened by Newton Fuller, Principal of Hill Street School, New London.

2.00 P. M. "Map Drawing;" Illustrated by a Class.

SECTION III.

Presiding Officer—MISS CELESTE E. BUSH, *New Britain.*

9.30 A. M. "Object Teaching in Primary Schools;" by Mrs. N. E. Winton, South School, Hartford.

10.15 A. M. "Incentives in the Primary School; by Miss C. B. Williams, Principal of Training School, New Haven.

11.00 A. M. "The Relation of the Kindergarten to Primary Schools, and what Teachers ought to know about Frœbel's System;" by Miss Elizabeth P. Peabody, Cambridge, Mass.

2.00 P. M. "Aims in Primary Teaching;" by N. A. Calkins, Superintendent of Primary Schools, New York City.

GENERAL MEETING,

IN THE HIGH SCHOOL HALL.

3.00 P. M. Choruses, and Exercises in Sight Singing, by pupils of the High School, under the direction of Prof. B. Jepson, Instructor in Vocal Music in the Public Schools, New Haven.

3.30 P. M. "Supervision;" by D. P. Corbin, Principal, Asylum Hill School, Hartford.

Friday Evening.

7.30. P. M. Reports of Committees, Election of Officers, &c.

8.00 P. M. Address, by Geo. T. Angell, Boston, Mass. Subject: "Importance and Methods of teaching kindness and merciful treatment to Dumb Animals."

RAILROAD ARRANGEMENTS.

Excursion Tickets to New Haven, and return, will be sold as follows:

From Hartford, $1.00: obtained by addressing F. F. Barrows. From New Britain, $1.00: obtained of I. N. Carleton. From Meriden, $0.75: obtaiaed of A. D. Mather. From New London, $2.00: obtained of E. B. Jennings. Teachers from Norwich and vicinity should send to E. B. Jennings, New London, for excursion tickets. From Middletown, *via.* Berlin, $1.00: obtained of H. E. Sawyer. From South Norwalk, $1.25: obtained of F. S. Lyon, South Norwalk. Teachers from Stamford, Danbury, and places in vicinity of Norwalk, should send to F. S. Lyon, South Norwalk.

HOTEL ACCOMMODATIONS.

Arrangements have been made with nearly all the hotels in New Haven, to accommodate teachers at reduced rates. Those who wish to attend only for the day, can obtain meals at restaurauts if they prefer.

The Hotels have made a reduction to members of the Association, and their rates will be as follows: Tontine Hotel, Church Street, $2.50 per day; Tremont House, Orange Street, $2.50 per day; New Haven House, Chapel Street, $3,50 per day; Madison House, State Street, $2.00 per day, or single meals, 75 cents; Merchant's Hotel, Depot, European plan.

PLACE OF MEETING.

High School Building, Orange street, corner of Wall street.

The meeting promises to be one of interest to teachers in *every department* of instruction.

School Committees and Boards of Education are cordially invited to be present and participate in the exercises. Also to request the attendance of teachers under their charge.

R. H. PARK, *Secretary.* H. C. DAVIS, *President.*

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ANNOUNCEMENT.

PROF. HIRAM ORCUTT, of Tilden's Ladies' Seminary, has in preparation, to be published at an early day,

The Parent's Manual: or, Home Training.

Designed as a counterpart to the Teacher's Manual, by the same author, published about two years since, which has had an extensive sale.

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The special attention of educators is called to

Eaton's Arithmetics.

By an act of Congress, of March 3, 1873, a New Method of computing exchange was established, to go into effect January 1, 1874.

This new method is now the only one recognized in business operations, and has been incorporated in EATON'S ARITHMETICS, with examples in conformity therewith.

EATON'S ARITHHETICS contain a full and complete explanation of the difference between specie and paper currency; also statements in regard to Government Bonds, with the rates of interest and other conditions attaching to them, with a full list of practical examples such as are used by business men.

Teachers will observe that the New can be used in connection with the former editions without the slightest inconvenience—in marked contrast with the different editions of many other works.

An edition of *Eaton's Common School Arithmetic* is now published, with Answers.

—o—

Bradbury's Eaton's Geometry

AND

Bradbury's Geometry and Trigonometry.

These books are of moderate size and adapted to the present grade of High Schools and Academies, and contain a thorough presentation of their respective subjects, enough to prepare for college or lead to the higher mathematics.

These works are used in the Girls' High School, Boston; also the high schools of Cambridge, Charlestown, Somerville, Newton, Winchester, Watertown, Marlboro, Beverly, Stoneham, and Melrose and one or more of the books in the high schools of Worcester, Lowell, Fitchburgh, New Bedford, Chelsea, Holyoke, Milford, Jamaica Plain, Plymouth, and numerous other towns in Massachusetts, Newport, and Pawtucket, R. I.; Saco, Me.; Concord, Manchester, Nashua, Dover, Claremont, and Keene, N. H.; Stamford, Bridgeport, Middletown, Thompsonville, and Norwich, Conn.; and Rutland, Brandon, and Windsor, Vt., besides a large number of other high schools and academies in different parts of the country.

Liberal terms for introduction. Descriptive Catalogue of above, and other valuable educational works sent on application.

Correspondence with Teachers and School Officers is respectfully solicited.

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25 and 29 CORNHILL, BOSTON.

Monroe's Readers.

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The First Reader,	.30
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The Third Reader,	.75
The Fourth Reader,	1.00
The Fifth Reader,	1.25
The Sixth Reader,	1.50

Monroe's Readers, before the whole Series was completed, were in use in the schools of over three hundred cities and towns. A leading educator writes: "This is surely *The Coming Series.*"

Warren's Geographies.

New Primary Geography,	.75
New Common School Geography,	1.88
New Physical Geography,	1.88

Warren's Geographies have for several years been the leading Text-Books in their department. The Series has just been revised, and all the modern improvements added.

Hagar's Mathematics.

Primary Lessons in Numbers,	.30
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Common School Arithmetic,	1.00
Dictation Problems and Key,	1.00
Elementary Algebra and Key, (EACH.)	1.25
Elementary Geometry, (IN PRESS.)	1.25

Hagar's Arithmetics, though issued less than two years, have sold to the unparalleled extent of nearly *Two Hundred Thousand Copies.* In continuation of this Series a full course of Higher Mathematics is in active preparation by eminent professors.

Greene's Grammars.

New Introduction to Eng. Gram.,	.56
New English Grammar,	1.05
New Analysis of Eng. Language,	1.20

Greene's Grammars are in use in over *Two Thousand Cities and Towns* in all parts of the country. The **Revised Analysis**, just issued, makes the new Series complete.

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